

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A computer program product tangibly embodied in a computer-readable storage medium, the product comprising instructions operable to cause a data processing apparatus to execute a method for navigating user interface elements displayed on a ~~display~~ screen, the method comprising:
 - ~~at application run time,~~ grouping the displayed user interface elements alphabetically into groups according to characters contained in text labels associated with the user interface elements, the user interface elements indicating, on the ~~display~~ screen, a user interface element currently having focus to receive user input;
 - detecting a user navigation input comprising:
 - ~~one of a forward user navigation input or a backward user navigation input, the forward user navigation input~~ comprising a forward modifier key press combined with a key press of ~~a group identifier~~ at least one text character identifying one of the groups of user interface elements, and
 - ~~the a backward user navigation input comprising a backward~~ a backward user navigation input comprising a backward modifier key press combined with a key press of [[a]] at least one text character identifying one of the groups of user interface elements group identifier;
 - identifying a group of user interface elements associated with the ~~group identifier~~ key press of at least one text character by comparing the ~~group identifier~~ key press of at least one text character to the

characters contained in the text labels associated with the user interface elements; and

shifting input focus to a user interface element in the identified group based on the user navigation input, the shifting comprising:

~~wherein,~~ when the user navigation input is detected:

determining a current group of user interface elements that contains the user interface element currently having input focus, and

determining a target group of user interface elements that has a corresponding text label containing characters matching the ~~group-identifier key press~~ of at least one text character ~~the group-identifier key press~~;

~~wherein~~ when the user navigation input is the forward user navigation input:

shifting input focus ~~is shifted~~ in the forward direction to a next user interface element in the current group having a text label containing characters matching the ~~group-identifier key press~~ if of at least one text character when the current group is the same as the target group, and

shifting input focus ~~is shifted~~ to a first user interface element in the target group if when the current group is not the same as the target group[[,]]; and

~~wherein~~ when the user navigation input is the backward user navigation input:

shifting input focus ~~is shifted~~ in the reverse direction to a previous user interface element in the current group having an associated text label matching the ~~group identifier~~ key press if of at least one text character when the current group is the same as the target group, and

shifting input focus ~~is shifted~~ to a user interface element last in order in the target group if when the current group is not the same as the target group.

2. (Canceled)
3. (Currently amended) The product of claim 1, wherein the ~~selected~~ identified group of user interface elements is identified when the text labels associated with the user interface elements contain first ~~first~~ characters matching the ~~group identifier~~ key press of at least one text character.
4. (Currently amended) The product of claim 3, wherein the first character matches the ~~group identifier~~ key press of at least one text character if both are the same character regardless of character case.
5. (Currently amended) The product of claim 3, wherein the first character matches the ~~group identifier~~ key press of the text character if both are the same character in the same case.
- 6 - 8. (Canceled)

9. (Currently amended) A computer program product tangibly embodied in a computer-readable storage medium, the product comprising instructions operable to cause a ~~data processing apparatus~~ computer to execute a method for navigating user interface elements displayed on a ~~display~~ screen, the method comprising:

~~at application run time,~~ grouping the user interface elements displayed on the screen alphabetically into groups according to characters contained in respective text labels associated with the user interface elements, the user interface elements indicating, on the ~~display~~ screen, a user interface element currently having focus to receive user input;

detecting a sequence of one or more user navigation inputs, ~~each user navigation input~~ comprising:

~~one of a forward user navigation input or a backward user navigation input,~~ the forward user navigation input comprising a forward modifier key press combined with a key press of a ~~group identifier~~ at least one text character identifying one of the groups of user interface elements, and

the a backward user navigation input comprising a backward modifier key press combined with a key press of [[a]] at least one text character identifying one of the groups of user interface elements ~~group identifier~~;

generating a navigation string from the ~~sequence of the one or more user~~ forward or backward navigation inputs;

identifying a group of user interface elements by comparing the navigation string to the characters contained in the text labels associated with the user interface elements; and

shifting input focus to a user interface element in the identified group
based on the navigation string, the shifting comprising: [[:]]

~~wherein~~, when the user navigation input is detected:

determining a current group of user interface elements that contains the user interface element currently having input focus, and

determining a target group of user interface elements that has a corresponding text label containing characters matching the ~~group-identifier key-~~
~~press~~ navigation string;

~~wherein~~ when the user navigation input is the forward user navigation input:

shifting input focus ~~is shifted~~ in the forward direction to a next user interface element in the current group having a corresponding text label containing characters matching the ~~group-identifier key-~~
~~press~~ navigation string when if the current group is the same as the target group, and

shifting input focus ~~is shifted~~ to a first user interface element in the target group when if the current group is not the same as the target group, and

~~wherein~~ when the user navigation input is the backward user navigation input:

shifting input focus ~~is shifted~~ in the reverse direction to a previous user interface element in the current group having a text label containing characters matching the ~~group-identifier key-~~

~~press-if~~ navigation string when the current group is the same as the target group, and
shifting input focus ~~is shifted to a~~ user interface element last in order in the target group when ~~[[if]]~~ the current group is not the same as the target group.

10. (Currently amended) The product of claim 9, wherein ~~instructions to detect~~ detecting a sequence of one or more user navigation inputs ~~comprises~~ comprise ~~instructions to:~~

~~detect~~ detecting a sequence of forward user navigation inputs, the sequence having a first user navigation input and a last user navigation input;

~~initialize~~ initializing the navigation string when the first user navigation input is detected;

~~start~~ starting a time out interval with each forward user navigation input;

and

~~determine~~ determining the last user navigation input as the input after which no forward user navigation inputs are detected within the time out interval.

11. (Currently amended) The product of claim 9, wherein ~~instructions to detect~~ detecting a sequence of one or more user navigation inputs ~~comprises~~ comprise ~~instructions to:~~

~~detect~~ detecting a sequence of backward user navigation inputs, the sequence having a first user navigation input and a last user navigation input;

~~initialize~~ initializing the navigation string when the first user navigation input is detected;

~~start~~ starting a time out interval with each backward user navigation input; and

~~determine~~ determining the last user navigation input as the input after which no backward user navigation inputs are detected within the time out interval.

12. (Currently amended) The product of claim 9, wherein the user interface elements have an order, and ~~instructions to shift~~ shifting input focus ~~comprises to the user interface element comprise instructions to:~~

~~shift~~ shifting input focus in the forward direction to a next user interface element in order in the current group having a text label starting with the same characters as the characters in the navigation string, if the user navigation input is the forward user navigation input; and

~~shift~~ shifting input focus in the reverse direction to a previous user interface element in order in the current group having a text label starting with the same characters as the characters in the navigation string, if the user navigation input is the backward user navigation input.

13. (Currently amended) A computer program product tangibly embodied in a computer-readable storage medium, the product comprising instructions operable to cause a data processing apparatus to execute a method for navigating user interface elements displayed on a ~~display~~ screen, method comprising:

~~at application run time,~~ grouping the displayed user interface elements alphabetically into groups according to characters contained in respective text labels associated with the user interface elements,

the user interface elements indicating, on the display screen, a user interface element currently having focus to receive user input;

detecting an ensemble of sequential user activation inputs, ~~each user activation input comprising a character, thereby detecting a sequence of characters, each user activation input comprising one of~~

a forward user activation input ~~or a backward user activation input, the forward user activation input comprising a~~ forward activation modifier key press combined with a key press of ~~a group identifier~~ at least one text character identifying one of the groups of user interface elements,

and

the a backward user activation input comprising a backward activation modifier key press combined with a key press of ~~a group identifier~~ at least one text character identifying one of the groups of user interface elements;

identifying a group of user interface elements by comparing the ~~sequence of characters~~ contained in the text labels associated with the user interface elements to the ~~group identifier~~ key press of at least one text character; and

performing an action associated with a user interface element in the identified group;

wherein, when the user activation input is detected:

determining a current group of user interface elements that contains the user interface element currently having input focus, and

determining a target group of user interface elements that has a corresponding text label containing characters matching

the ~~group identifier~~ key press of at least one text character;

~~wherein~~ when the user activation input is the forward user activation input:

shifting input focus ~~is shifted~~ in the forward direction to a next user interface element in the current group having an associated text label with characters matching the ~~group identifier~~ key press of the at least one text character when if the current group is the same as the target group, and

shifting input focus ~~is shifted~~ to a first user interface element in the target group when if the current group is not the same as the target group ;[[,]] and

~~wherein~~ when the user activation input is the backward user activation input:

shifting input focus ~~is shifted~~ in the reverse direction to a previous user interface element in the current group having an associated text label with characters matching the ~~group identifier~~ key press of at least one text character when if the current group is the same as the target group, and

shifting input focus ~~is shifted~~ to a user interface element last in order in the target group when [[if]] the current group is not the same as the target group .

14. (Currently amended) The product of claim 13, wherein the method further comprises instructions to detect an ensemble ~~comprise instructions to: detect a sequence of one or more characters that~~

determining whether the key press of at least one text character uniquely identifies a user interface element; and
automatically executing an action associated with the user interface element when it is determined that the key press of at least one text character uniquely identifies [[a]] the user interface element.

15. (Currently amended) The product of claim 14, wherein the ~~sequence of key press of at least one text character comprises or more characters~~ is a sequence of identical group identifier characters.
16. (Currently amended) The product of claim 13, wherein ~~instructions to detect detecting~~ an ensemble comprises detecting ~~comprise instructions to detect~~ one or more sequential user activation inputs entered by a user within a time threshold.
17. (Currently amended) The product of claim 13, wherein the method further comprises delimiting the user activation input based on the pressing and releasing of an activation modifier key ~~delimits the user activation inputs in the ensemble.~~
18. (Currently amended) A computer implemented method for navigating user interface elements displayed on a display screen, the method comprising the steps performed by a computer of:
at application run time, grouping the user interface elements displayed on the screen alphabetically into user interface element groups according to characters contained in respective text labels associated with the user interface elements, the user interface elements indicating, on the display screen, a user interface element currently having focus to receive user input;
detecting a user navigation input comprising:

~~one of a forward user navigation input or a backward user~~
~~navigation input, the forward user navigation input~~
comprising a forward modifier key press combined with a
key press of a ~~group identifier~~ at least one text character
identifying one of the groups of user interface elements, and

the a backward user navigation input comprising a backward
modifier key press combined with a key press of a ~~group~~
~~identifier~~ at least one text character identifying one of the
groups of user interface elements;

identifying a group of user interface elements associated with the ~~group~~
~~identifier~~ key press of at least one text character by comparing the
~~group identifier~~ key press of at least one text character to the
characters contained in the text labels associated with the user
interface elements; and

shifting input focus to a user interface element in the identified group
based on the user navigation input, the shifting comprising[[:;]]

~~wherein~~, when the user navigation input is detected:

determining a current group of user interface elements
that contains the user interface element currently
having input focus, and

determining a target group of user interface elements that
has an associated text label containing characters
matching the ~~group identifier~~ key press of at least
one text character;

~~wherein~~ when the user navigation input is the forward user
navigation input:

shifting input focus ~~is shifted~~ in the forward
direction to a next user interface element in

the current group having a text label
containing characters matching the ~~group-
identifier~~ key press of at least one text
character when if the current group is the
same as the target group , and

shifting input focus ~~is shifted~~ to a first user
interface element in the target group when
if the current group is not the same as the
target group, and

~~wherein~~ when the user navigation input is the backward user
navigation input:

shifting input focus ~~is shifted~~ in the reverse direction
to a previous user interface element in the
current group having a text label ~~containing-
characters~~ matching the ~~group-identifier~~ key
press ~~if~~ of at least one text character when the
current group is the same as the target group,
and

shifting input focus ~~is shifted~~ to a user interface
element last in order in the target group when if
the current group is not the same as the target
group .

19. (Canceled)

20. (Currently amended) The method of claim 18, wherein the identified group of
user interface elements is identified when the text labels associated with the user
interface elements contain first characters matching the ~~group-identifier~~ key press
of at least one text character.

21. (Previously Presented) The method of claim 18, wherein the user interface elements are grouped based on the first characters contained in the associated text labels of the user interface elements.
22. (Currently amended) The method of claim 18, wherein:
- the forward user navigation input ~~is~~ comprises a combination of one or more forward modifier keys and the ~~group identifier~~ key press of at least one text character; and
- the backward user navigation input ~~is~~ comprises a combination of one or more backward modifier keys and the ~~group identifier~~ key press of at least one text character.
23. (Currently amended) A computer implemented method[[,]] for a software application having user interface elements displayed on a ~~display~~ screen, the method performed by a computer and comprising the steps of:
- ~~at application run time~~, grouping the user interface elements displayed on the screen alphabetically into ~~user interface element~~ groups according to characters contained in text labels associated with the user interface elements, the interface elements indicating, on the ~~display~~ screen, a user interface element currently having focus to receive user input;
- detecting a sequence of one or more user navigation inputs, ~~each user navigation input~~ comprising:
- ~~one of a forward user navigation input or a backward user navigation input~~, ~~the forward user navigation input~~ comprising a forward modifier key press combined with a key press of a ~~group identifier~~ at least one text character identifying one of the groups of user interface elements, and

~~the a~~ backward user navigation input comprising a backward
modifier key press combined with a key press of a ~~group-~~
~~identifier~~ at least one text character identifying one of the
groups of user interface elements;

generating a navigation string from the ~~sequence of one or more~~ forward
or backward user navigation ~~inputs~~ input; and

identifying a group of user interface elements by comparing the navigation
string to the characters contained in the text labels associated with
the user interface elements;

shifting input focus to a user interface element in the identified group
based on the navigation string, the shifting comprising:[:;]

~~wherein,~~ when the user navigation input is detected:

determining a current group of user interface elements
that contains the user interface element currently
having input focus, and

determining a target group of user interface elements that
has an associated text label containing characters
~~that correspond to~~ matching the group identifier
key press of at least one text character;

~~wherein~~ when the user navigation input is the forward user
navigation input:

shifting input focus ~~is shifted~~ in the forward direction
to a next user interface element next in the
current group having a text label containing
characters matching the ~~group identifier~~ key
press of at least one text character when if the
current group is the same as the target group,
and

shifting input focus ~~is shifted~~ to a first user interface element in the target group when if the current group is not the same as the target group, and wherein when the user navigation input is the backward user navigation input:

shifting input focus ~~is shifted~~ in the reverse direction to a previous user interface element in the current group having a text label containing characters matching the ~~group identifier~~ key press of at least one text character when if the current group is the same as the target group, and

shifting input focus ~~is shifted~~ to a user interface element last in order in the target group if the current group is not the same as the target group.

24. (Previously Presented) The method of claim 23, wherein detecting a sequence of one or more user navigation inputs comprises:

detecting a sequence of forward user navigation inputs, the sequence having a first user navigation input and a last user navigation input; initializing the navigation string when the first user navigation input is detected;

starting a time out interval with each forward user navigation input; and

determining the last user navigation input as the input after which no forward user navigation inputs are detected within the time out interval.

25. (Previously Presented) The method of claim 23, wherein detecting a sequence of one or more user navigation inputs comprises:

detecting a sequence of backward user navigation inputs, the sequence having a first user navigation input and a last user navigation input; initializing the navigation string when the first user navigation input is detected;

starting a time out interval with each backward navigation key press; and

determining the last navigation key press as the key press after which no backward navigation key presses are detected within the time out interval.

26. (Currently amended) The method of claim 23, wherein the user interface elements have an order, and shifting input focus comprises:

if the user navigation input is the forward user navigation input, shifting input focus in order in the forward direction to a next user interface element in the current group having a text label starting with the same characters as the characters in the navigation string; and

if the user navigation input is the backward user navigation input, shifting input focus in order in the reverse direction to a previous user interface element in the current group having a text label starting with the same characters as the characters in the navigation string.

27. (Currently amended) A computer implemented method for providing activation keys for user interface elements displayed on a display screen, the method performed by a computer and comprising the steps of:

~~at application run time,~~ grouping the user interface elements displayed on the screen alphabetically into user interface element groups according to characters contained in respective text labels

associated with the user interface elements, the user interface elements indicating, on the display screen, a user interface element currently having focus to receive user input;

detecting an ensemble of sequential user activation inputs, ~~each user activation input comprising: a character, thereby detecting a sequence of characters, each user activation input comprising one of~~

~~a forward user activation input or a backward user activation input, the forward user activation input comprising a forward activation modifier key press combined with a key press of a group identifier~~ at least one text character identifying one of the groups of user interface elements,
and

~~the a backward user activation input comprising a backward activation modifier key press combined with a key press of a group identifier~~ at least one text character identifying one of the groups of user interface elements;

identifying a group of user interface elements by comparing the characters contained in the text labels associated with the user interface elements to the sequence key press of at least one text character characters; and

performing an action associated with the a user interface element in the identified group, the performing comprising:[[:]]

~~wherein,~~ when the user activation input is detected:

determining a current group of user interface elements that contains the user interface element currently having input focus, and

determining a target group of user interface elements
that has an associated text label containing
characters matching to the ~~group-identifier~~ key
press of at least one text character;

~~wherein~~ when the user activation input is the forward user
activation input:

shifting input focus ~~is shifted~~ in the forward direction
to a next user interface element in the current
group having a text label containing characters
matching the ~~group-identifier~~ key press of at
least one text character when if the current
group is the same as the target group, and

shifting input focus ~~is shifted~~ to a first user interface
element in the target group if when the current
group is not the same as the target group, and

~~wherein~~ when the user activation input is the backward user
activation input:

shifting input focus ~~is shifted~~ in the reverse direction
to a previous user interface element ~~previous~~
in the current group having a text label
containing characters matching the ~~group-~~
~~identifier~~ key press of at least one text
character when if the current group is the same
as the target group, and

shifting input focus ~~is shifted~~ to a user interface
element last in order in the target group if when
the current group is not the same as the target
group.

28. (Currently amended) The method of claim 27, further comprising wherein
detecting an ensemble comprises:

determining whether the key press of at least one text character uniquely
identifies a user interface element; and

automatically executing an action associated with the user interface
element when it is determined that the key press of at least one text
character detecting a sequence of one or more characters that
uniquely identifies [[a]] the user interface element.
29. (Currently amended) The method of claim 28, wherein the ~~sequence of one or more characters is~~ key press of at least one text character comprises a sequence of identical group identifier characters.
30. (Currently amended) The method of claim 27, wherein detecting an ensemble comprises~~[[:]]~~ detecting one or more sequential user activation inputs entered by a user within a time threshold.
31. (Currently amended) The method of claim 27, ~~wherein:~~ further comprising
delimiting the user activation inputs in the ensemble based on the pressing and
releasing of an activation modifier key delimits the user activation inputs in the
ensemble.
32. (Previously Presented) The product of claim 1, wherein, if there is no current group, the target group is deemed to be different from the current group and input focus is shifted to a first user interface element in the target group.
33. (Previously Presented) The product of claim 9, wherein, if there is no current group, the target group is deemed to be different from the current group and input focus is shifted to a first user interface element in the target group.

34. (Previously Presented) The product of claim 13, wherein, if there is no current group, the target group is deemed to be different from the current group and input focus is shifted to a first user interface element in the target group.
35. (Previously Presented) The method of claim 18, wherein, if there is no current group, the target group is deemed to be different from the current group and input focus is shifted to a first user interface element in the target group.
36. (Previously Presented) The method of claim 23, wherein, if there is no current group, the target group is deemed to be different from the current group and input focus is shifted to a first user interface element in the target group.
37. (Previously Presented) The method of claim 27, wherein, if there is no current group, the target group is deemed to be different from the current group and input focus is shifted to a first user interface element in the target group.
38. (New) The method of claim 18, further comprising:
 - receiving a display of a graphical user interface, the graphical user interface including the user interface elements;
 - identifying the user interface elements in the display of the graphical user interface; and
 - extracting from the display text labels for the identified user interface elements.